Attorney Docket No.: FMCE-P073

Remarks

Reconsideration of the above-identified application is respectfully requested.

Claims 1, 2, 4-13, 16, 17 and 19 stand rejected under 35 U.S.C. 102(b) as being anticipated by Flaherty (U.S. Patent No. 4,445,694). Claims 2, 5, 6, 10-13 and 19 have been canceled. With regard to claim 1, however, Flaherty does not disclose a seal component which comprises a shape memory alloy and which expands upon being heated to form a metal-to-metal seal with a corresponding sealing surface. Rather, in Flaherty the inner coil 1 is made of a shape memory alloy while the outer wrapper 4 is the component that actually seals against the flanges 6 and 8 (see column 2, lines 40-41). Therefore, Flaherty does not anticipate claim 1.

Furthermore, claims 4, 7-9, 16 and 17 depend from claim 1. Therefore, these claims are novel over Flaherty for the reasons stated above with respect to claim 1.

Claims 1-3, 5-15 and 18 stand rejected under 35 U.S.C. 102(b) as being anticipated by GB 1,299,819. Claims 2, 5, 6 and 10-13 have been canceled. With regard to claim 1, however, GB '819 fails to disclose a seal component which comprises a shape memory alloy, which has an initial configuration that forms a clearance fit with a bore, and which expands upon being heated to form a metal-to-metal seal with a recessed surface that is formed in the bore. In GB '819, the seals 4 and 25 appear to be in constant engagement with the bore in the hydraulic component 1 (see Figures 2 and 3 for seal 4 and Figures 6 and 7

for seal 25). Moreover, although th seal 25 appears to form a clearance fit with the outer surface of the adapter 3 (see Figure 6), this outer surface does not constitute a "bore" within the meaning of claim 1. Therefore, GB '819 does not anticipate claim 1.

Furthermore, claims 3, 7-9, 14, 15 and 18 depend from claim 1. Therefore, these claims are novel over GB '819 for the reasons stated above with respect to claim 1.

Claims 1, 2, 5-14 and 16-19 stand rejected under 35 U.S.C. 102(b) as being anticipated by Krumme (U.S. Patent No. 4,773,680). Claims 2, 5, 6, 10-13 and 19 have been canceled. With respect to claim 1, however, Krumme does not disclose a seal component which comprises a shape memory alloy, which has an initial configuration that forms a clearance fit with a bore, and which expands upon being heated to form a metal-to-metal seal with a recessed surface that is formed in the bore. In Krumme, although the rings 16 initially comprise an exterior diameter that is less than the diameter of the annuli 12, 14, the rings do not expand upon being heated to form a metal-to-metal seal with a recessed surface in the annuli. This is due to the fact that the annuli 12, 14 do not comprise such a recessed surface (see Figure 1). Therefore, Krumme does not anticipate claim 1.

Furthermore, claims 7-9, 14 and 16-18 depend from claim 1. Therefore, these claims are novel over Krumme for the reasons stated above with respect to claim 1.

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The prior art made of record but not relied upon has been considered but is not believed to be pertinent to the patentability of the present invention.

In light of the foregoing, claims 1, 3, 4, 7-9, 14-18 and 20 are submitted as allowable. Favorable action is solicited.

Respectfully submitted,

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Claim Amendments:

Claims 1, 3, 4, 7-9 and 14-18 have been amended as follows:

1(Amended). A metallic seal component [comprising an alloy which in use exhibits super-elastic properties] which is installable in a bore that includes a recessed surface, the seal component comprising a shape memory alloy and an initial configuration that forms a clearance fit with the bore, wherein the seal component expands upon being heated to form a metal-to-metal seal with the recessed surface.

3(Amended). A seal component as defined in claim [2 comprising] 1, wherein the seal component is adapted to be energized by an energizing mandrel that comprises a shape memory alloy and that expands upon being heated.

4(Amended). A seal component as defined in claim [2 comprising] 1, wherein the seal component comprises a seal backup spring.

7(Amended). A seal component as defined in claim [5 in which] 1, wherein the [sealing element] seal component comprises a sealing ridge that, in use, makes sealing contact with [a co-operating] the sealing surface.

8(Amended). A seal component as defined in claim [5 in which] 1, wherein the [sealing element] seal component has a U-shaped cross-section.

9(Amended). A seal component as defined in claim [2 in which] 1, wherein the shape memory alloy is selected from the group consisting of NiTi, CuZnAl and CuAlNi.

14(Amended). A seal component as defined in claim 1 [comprising], wherein the shape memory alloy comprises a one-way shape memory alloy.

15(Amended). A seal component as defined in claim 1 [comprising], wherein the shape memory alloy comprises a two-way shape memory alloy.

16(Amended). A seal component as defined in claim 1 [comprising], wherein the seal component comprises a bi-metallic construction.

17(Amended). A seal component as defined in claim 16 [having], wherein the seal component comprises a U-shaped cross-section.

18(Amended). A seal component as defined in claim 1 [having], wherein the seal component comprises a tubular cross-section.